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JUTTA DOUGLASPATENT APPLICATION
IN THE UNITED STATES PATENT AND TRADEMARK OFFICEIN THE APPLICATION OF
STEPHEN A. GROTDOCKET NO.: GROT-1_{III}

SERIAL NO.: 10/701,297

EXAMINER: A. ECHELMMEYER

FILED: NOVEMBER 3, 2003

ART UNIT: 1745

TITLE: FUEL CELL ELECTRODE ASSEMBLIES

WILMINGTON, DE
DATE: December 22, 2006

RESPONSE

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In response to the Office Action in the above case dated August 24, 2006, reconsideration of the above-identified application is respectfully requested on the basis of the following remarks, which, together with the accompanying Declaration of Dr. Grot, are considered to obviate the outstanding rejection, and place Claims 1-9 in condition for allowance.

The present invention relates to membrane electrode assemblies consisting essentially of a central layer comprising at least two solution-cast ionomer components and a catalyst layer adjacent to each side of the central layer. As discussed in the present specification at page 5, in the paragraph in the middle of the page, the at least two solution-cast membranes required in the present invention substantially reduce the possibility of pinhole defects in the final structure.

This is further confirmed in the accompanying Declaration by Dr. Grot. As discussed by Dr. Grot, the uniformity of the solution-cast membranes is crucial to good long term durability of the membrane component. This is explained in the publication of Kundu et al. submitted with the Declaration. Such uniformity is attained by the presently required solution-cast ionomer components. By contrast, the membrane preparation techniques described in Dahr '863 result in defects such as mud-cracks, craters and clumps, which are